ELSEVIER

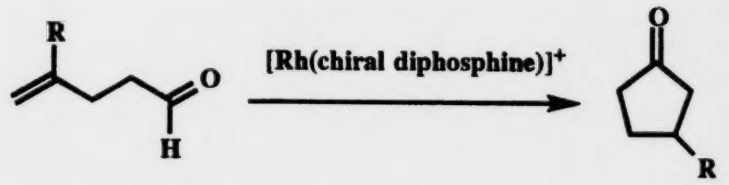
Volume 263, Numbers 1–2, 15 October 1997

Inorganica Chimica Acta

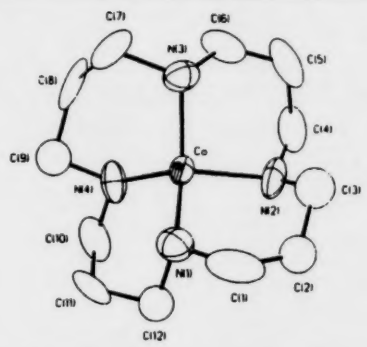
# Contents

Preface ..... xv

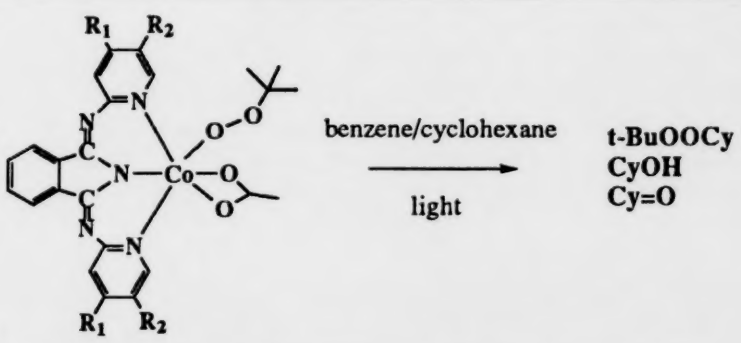
Enantioselective catalytic intramolecular hydroacylation ..... 1
R.W. Barnhart, D.A. McMorran, B. Bosnich



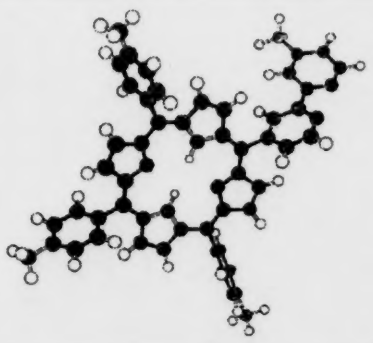

Cobalt(II) complexes with the 1,5,9,13-tetraazacyclohexadecane ligand ..... 9
L. Chen, F.A. Cotton



Photoinduced oxidation of hydrocarbons with cobalt(III)-alkylperoxy complexes ..... 17
E.T. Farinas, C.V. Nguyen, P.K. Mascharak




Enhancement of electron spin relaxation rates of metalloporphyrins due to interaction with a faster relaxing metal bound to an appended bipyridyl ..... 23
J.M. Burchfield, J.-L. Du, K.M. More, S.S. Eaton, G.R. Eaton



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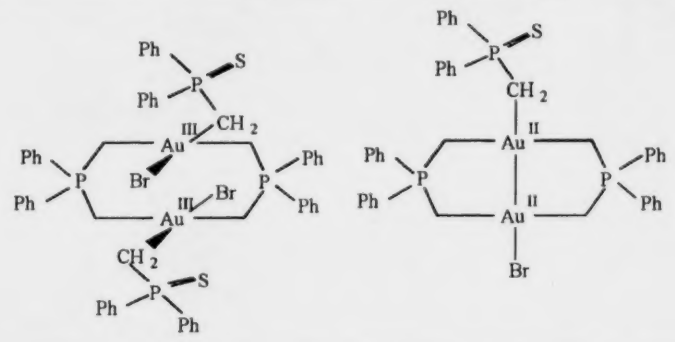
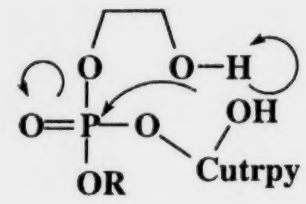
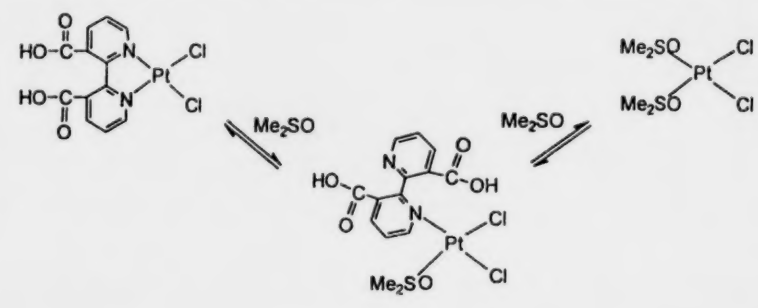
Substitution and reduction reactions of halogenated dinuclear gold ylide complexes with anionic sulfur reagents. The molecular structures of $\{Au^{II}[\mu\text{-}(CH_2)_2PPh_2]\}_2(DTP)_2$ (**1**), $\{Au^{II}[\mu\text{-}(CH_2)_2PMe_2]\}_2(MTP)_2$ (**3**), *anti*-$\{[Au^{III}Br(MTP)[\mu\text{-}(CH_2)_2PPh_2]\}_2 \cdot C_6H_6$ (**4**), $\{Au^{II}[\mu\text{-}(CH_2)_2PPh_2]\}_2(MTP)Br$ (**5**) and $\{Au^{III}_2(\mu\text{-}CH_2)[\mu\text{-}(CH_2)_2PPh_2]_2\}(DTP)_2$ (**7**), $MTP = [CH_2P(S)Ph_2]^-$, $DTP = [S_2PPh_2]$ ..... 35
D.C. Neitling, R.J. Staples, J.P. Fackler, Jr.



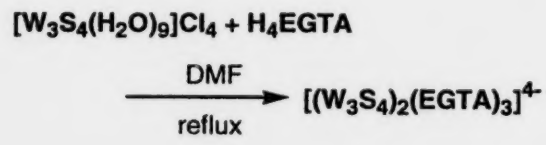
Transesterification of RNA by Cu(II)terpyridine..... 49
L.A. Jenkins Autry, J.K. Bashkin



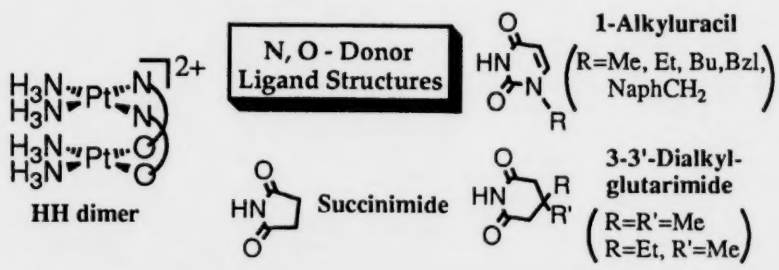

Platinum(II) complexes of 3,3′-disubstituted-2,2′-bipyridines. Synthesis, structures, cytotoxic effect and unusual solvolysis in DMSO ..... 53
J. Yoo, J.-H. Kim, Y.S. Sohn, Y. Do



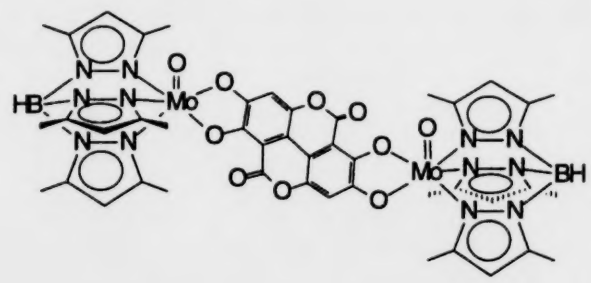

The synthesis, characterization and biological studies of a dimeric $W_3S_4$ cluster complex: a new potential X-ray contrast agent ..... 61
S.-B. Yu, M. Droege, B. Segal, S. Downey, T. Sanderson, J. Fellmann, A. Watson

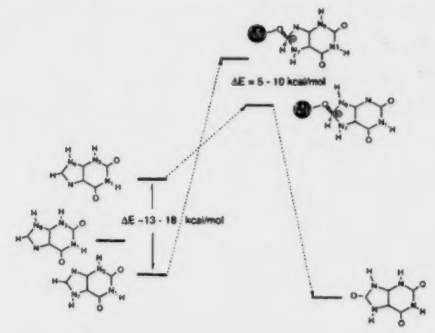
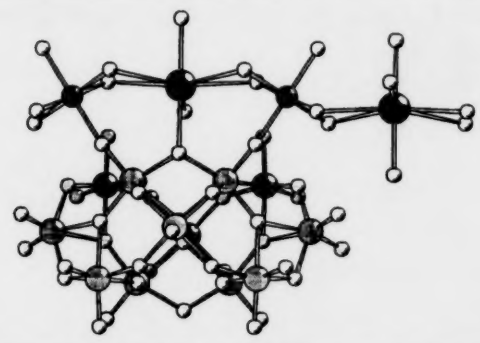
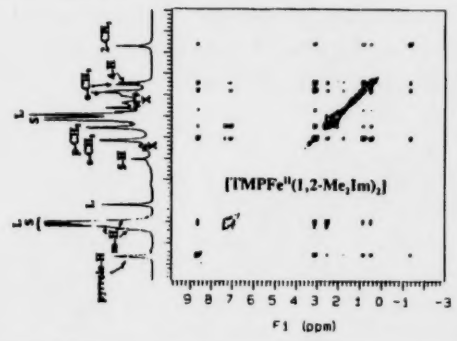
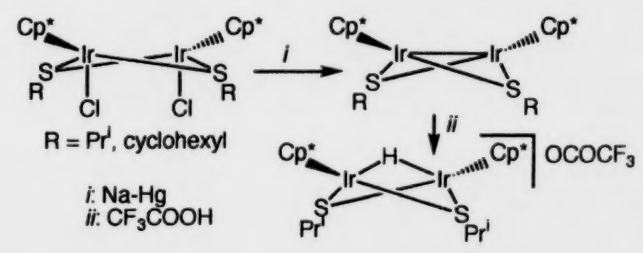
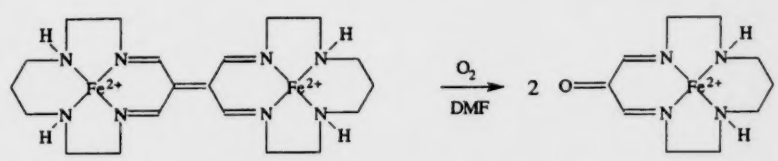



Preparation, structure and cytotoxicity of *cis*-diammineplatinum(II) dinuclear complexes with 1-alkyluracil and imidate ligands..... 69
Y. Dohta, C.S. Browning, P. Rekonen, M. Kodaka, T. Okada, K. Okamoto, R. Natale, C. Yip, D.H. Farrar, H. Okuno

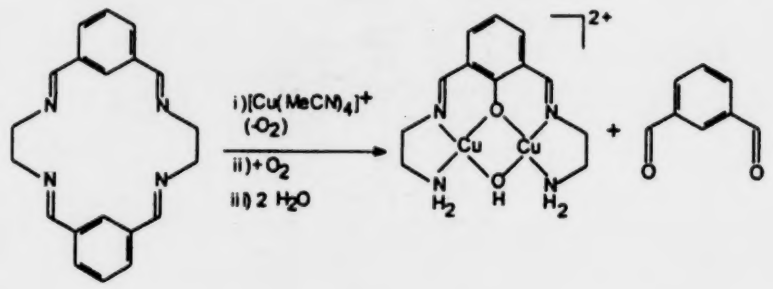



A paramagnetic complex possessing two oxo–Mo(V) centers..... 81
P. Basu, J.H. Enemark



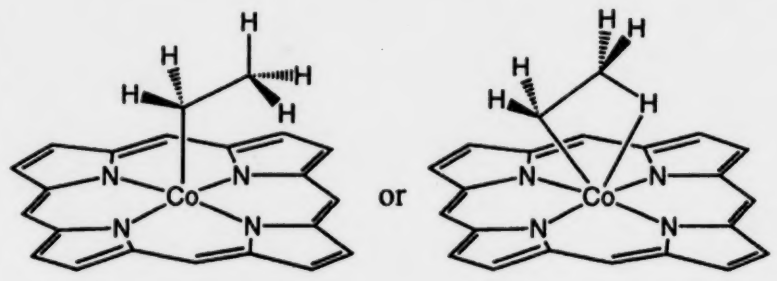
| | |
|---|---|
| Tautomerization of the substrate heterocycle in the course of the reaction of xanthine oxidase ..... 87<br>P. Ilich, R. Hille |  |
| A magnetochemical series<br>Part II ..... 95<br>C.A. Reed | $Ag(CB_{11}H_{12})_2^- < CB_{11}H_{12}^- < SbF_6^- < Co(C_2B_9H_{11})_2^- < AsF_6^- < ClO_4^- \leq C(CN)_3^- < CF_3SO_3^- < BF_4^- < ONC(CN)_2^- < ReO_4^- < OTeF_5^- < I^- < Br^- < Cl^- < NCS^- < OAc^- \sim N_3^- < OPh(p\text{-}NO_2)^- < OPh^- < F^- < RS^- <$ fluoro-aryl < aryl < alkyl ~ $HS^-$ ~ trialkyltin < CO ~ $NO^+$ |
| Synthesis, structure of polymeric cobalt-containing heteropolytungstates and their applications in oxidation catalysis ..... 99<br>I. Loose, M. Bösing, R. Klein, B. Krebs, R.P. Schulz, B. Scharbert |  |
| Rates of axial ligand rotation in diamagnetic $d^6$ Co(III) and Fe(II) porphyrinates ..... 109<br>J.R. Polam, T.Kh. Shokhireva, K. Raffii, U. Simonis, F.A. Walker |  |
| Preparation of a series of dinuclear Ir(III) and Ir(II) complexes containing bridging thiolate ligands ..... 119<br>M. Nishio, H. Matsuzaka, Y. Mizobe, M. Hidai |  |
| Reaction of dioxygen with a cross-conjugated carbon–carbon double bond in a bis-macrocycle diiron compound ..... 125<br>D.B. MacQueen, C. Lange, M. Calvin, J.W. Otvos, L.O. Spreer, C.B. Allan, A. Ganse, R.B. Frankel |  |

A new tyrosinase model system: formation of a phenoxy- and hydroxy-bridged copper(II) complex with partial hydrolysis of a tetraaza macrocyclic Schiff base ligand ..... 133
R. Gupta, R. Mukherjee

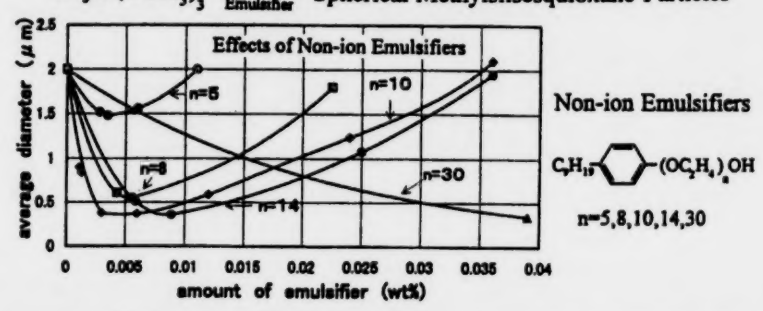


Do organocobalt porphyrins have agostic alkyl groups? An investigation of the structure of ethyl cobalt(III) octaethylporphyrin and the nuclear magnetic resonance spectra of $^{13}C$-labeled alkyl cobalt(III) porphyrin complexes ..... 139
Y. Cao, J.L. Petersen, A.M. Stolzenberg

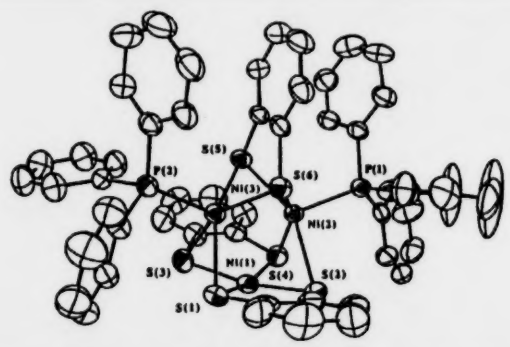


A facile preparation of spherical methylsilsesquioxane particles by emulsion polymerization ..... 149
I. Noda, M. Isikawa, M. Yamawaki, Y. Sasaki

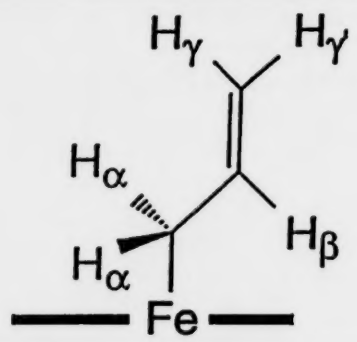


Synthesis and structure of a thiolate-ligated Ni cluster which contains an unusual thiolate bridging mode and an exposed Ni site..... 153
M. Cha, J. Sletten, S. Critchlow, J.A. Kovacs

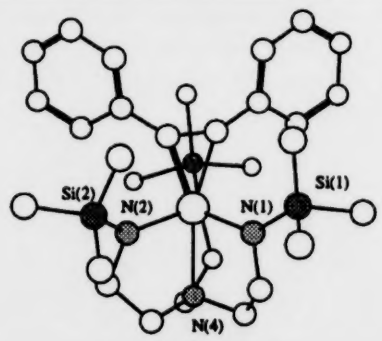


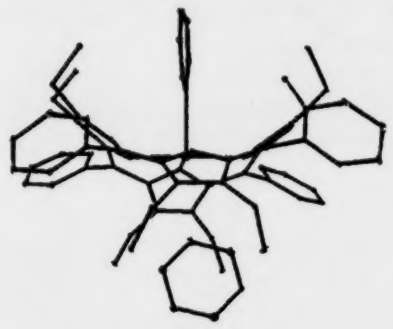
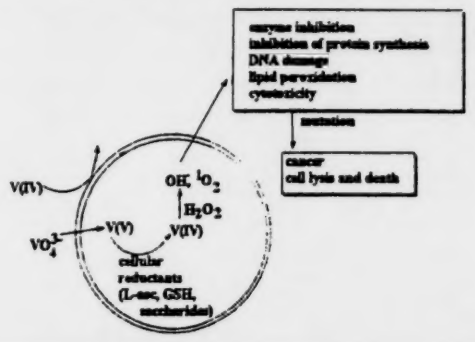
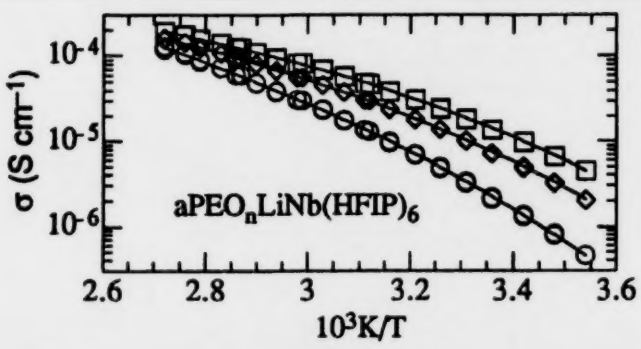
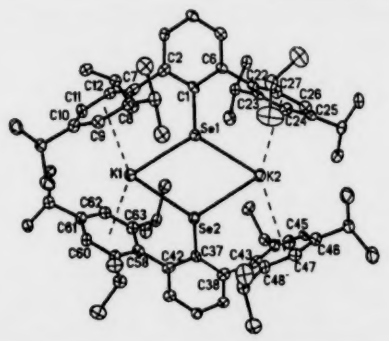
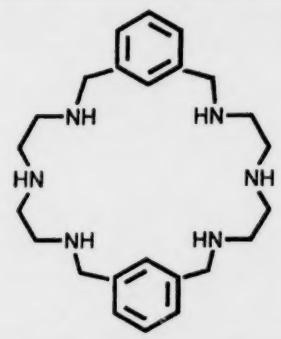
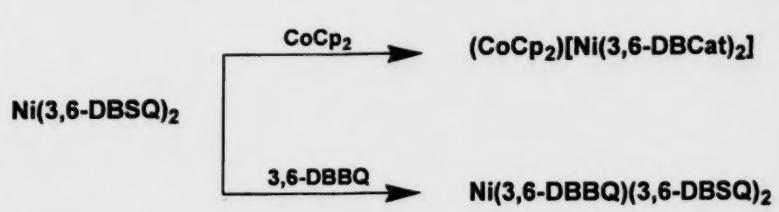
Paramagnetic iron(III) and diamagnetic gallium(III) porphyrin complexes with axial allyl and vinyl ligands ..... 161
R.D. Arasasingham, A.L. Balch, M.M. Olmstead, S.L. Phillips

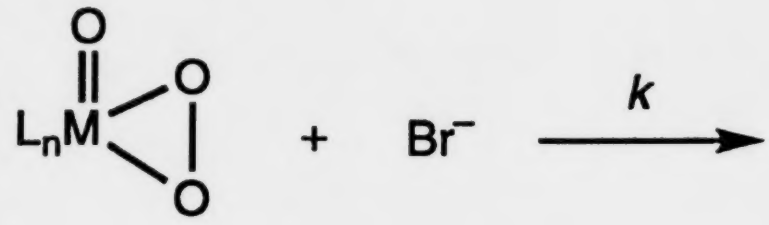


Reactions of $[(Me_3SiNCH_2CH_2)_3N]WH$ with dihydrogen, olefins, acetylenes, carbon monoxide, n-butylisocyanide and azobenzene... 171
D.A. Dobbs, R.R. Schrock, W.M. Davis

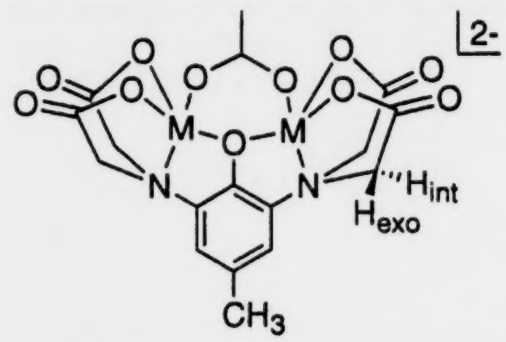



| | |
|---|---|
| Conformational landscapes of nonplanar porphyrins: superstructure, ligation, binding pockets and oxidation effects in Cu(II) porphyrins ..... 181<br>M.W. Renner, K.M. Barkigia, J. Fajer |  |
| Vanadate and chromate reduction by saccharides and L-ascorbic acid: effect of the isolated V(IV) and Cr(III) products on DNA nicking, lipid peroxidation, cytotoxicity and on enzymatic and non-enzymatic antioxidants ..... 189<br>A. Sreedhara, N. Susa, C.P. Rao |  |
| $Nb(OCH(CF_3)_2)_6^-$: prototype for a new class of weakly coordinating anions based on polyfluoroalkoxide substituents ..... 195<br>J.J. Rockwell, G.M. Kloster, W.J. DuBay, P.A. Grieco, D.F. Shriver, S.H. Strauss |  |
| Synthesis and characterization of some Group 1 and 2 metal derivatives of the crowding terphenyl thiolate and selenolate ligands $-EC_6H_3$-2,6-$Trip_2$ (E = S or Se; Trip = 2,4,6-i-$Pr_3C_6H_2^-$) ..... 201<br>M. Niemeyer, P.P. Power |  |
| Molecular recognition of nucleotides by the protonated macrocyclic ligand 3,6,9,17,20,23-hexaazatricyclo[23.3.1.$1^{11,15}$]triaconta-1(29), 11(30),12,14,25,27-hexaene and by its Cu(II) complexes; catalysis of the conversion of ATP to ADP ..... 209<br>D.A. Nation, Q. Lu, A.E. Martell |  |
| Nickel complexes containing catecholate, benzoquinone and semiquinone radical ligands ..... 219<br>C.W. Lange, C.G. Pierpont |  |

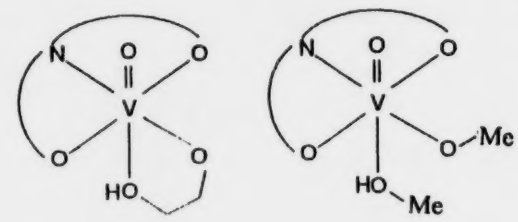
Kinetics of bromide oxidation by peroxo complexes of molybdenum(VI) and tungsten(VI) ..... 225
M.S. Reynolds, K.J. Babinski, M.C. Bouteneff, J.L. Brown, R.E. Campbell, M.A. Cowan, M.R. Durwin, T. Foss, P. O'Brien, H.R. Penn



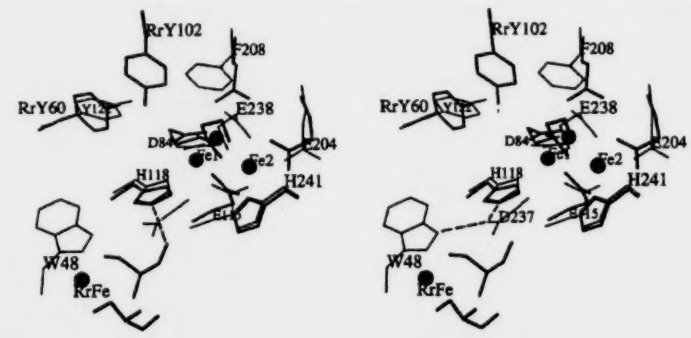

Synthesis and characterization of a constricted and rigid ligand system for five-coordinate binuclear complexes..... 231
L. Cai, W. Xie, H. Mahmoud, Y. Han, D.J. Wink, S. Li, C.J. O'Connor



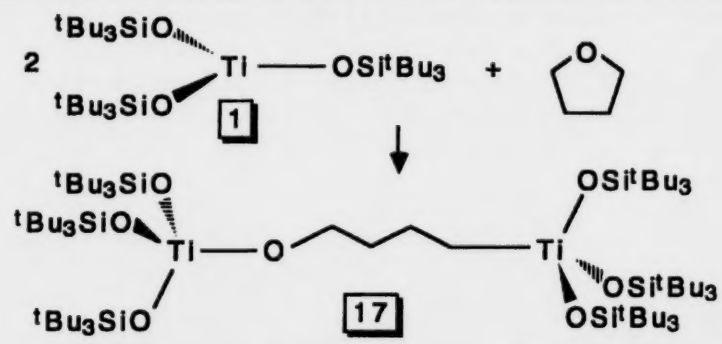

Chemistry of hydrazonato oxovanadium(V) alkoxides derived from dihydric/monohydric alcohols ..... 247
S.P. Rath, S. Mondal, A. Chakravorty



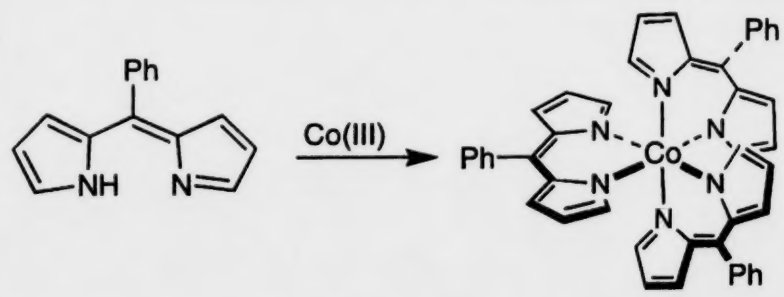

Re-engineering the diiron site in rubrerythrin towards that in ribonucleotide reductase ..... 255
F. deMaré, P. Nordlund, N. Gupta, N.V. Shenvi, X. Cui, D.M. Kurtz, Jr.

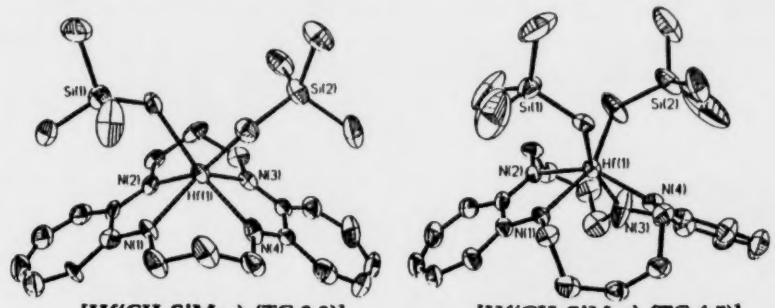
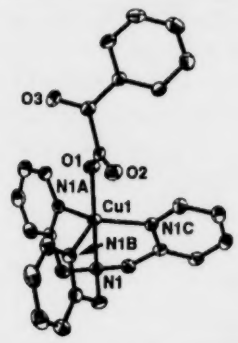
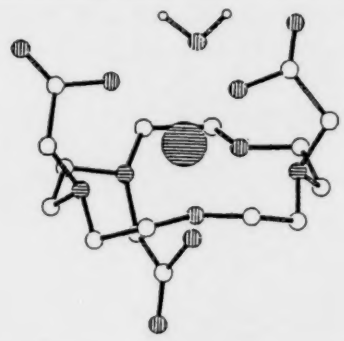
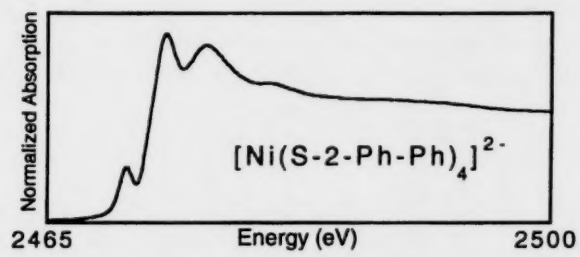
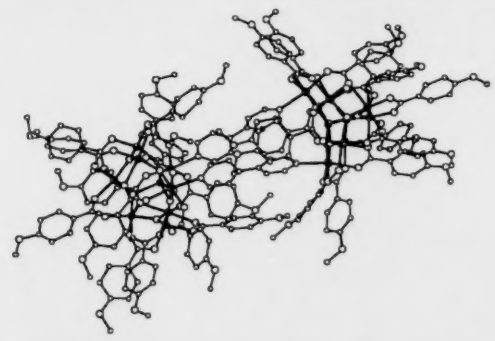
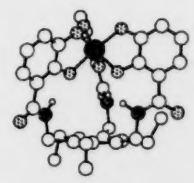



Carbon–oxygen and related R–X bond cleavages mediated by $(silox)_3Ti$ and other Group 4 derivatives ($silox = {}^tBu_3SiO$) ..... 263
K.J. Covert, A.-R. Mayol, P.T. Wolczanski

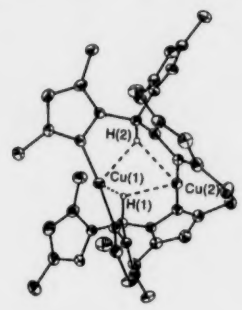



Synthesis, derivatization and structural characterization of octahedral tris(5-phenyl-4,6-dipyrrinato) complexes of cobalt(III) and iron(III) ..... 279
C. Brückner, Y. Zhang, S.J. Rettig, D. Dolphin

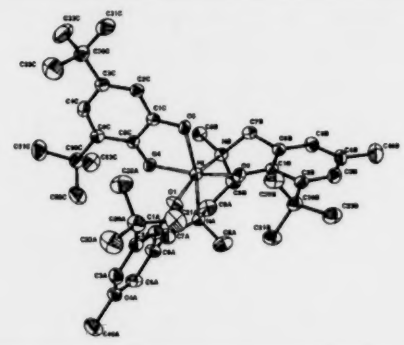


| | |
|---|---|
| Synthesis and characterization of Zr(IV) and Hf(IV) tropocoronand complexes ..... 287<br>M.J. Scott, S.J. Lippard |  [Hf(CH$_2$SiMe$_3$)$_2$(TC-3,3)] [Hf(CH$_2$SiMe$_3$)$_2$(TC-4,5)] |
| Cu(II)–$\alpha$-keto acid complexes as structural models of $\alpha$-keto acid-dependent enzymes: syntheses, crystal structure and properties of [Cu(L)(benzoylformate)]X ..... 301<br>H. Zheng, L. Que, Jr. |  |
| Characterization of lanthanide ion binding to macrocyclic tricarboxylate ligands containing 12-, 15- and 18-membered rings by europium(III) luminescence spectroscopy ..... 309<br>Y. Wang, W.D. Horrocks, Jr. | [Eu(15-N$_3$O$_2$)(H$_2$O)]<br>up, up, down  |
| Ligand K-edge X-ray absorption spectroscopic studies: metal–ligand covalency in transition metal tetrathiolates..... 315<br>K.R. Williams, B. Hedman, K.O. Hodgson, E.I. Solomon |  |
| [Mn$_3$O(O$_2$CPh)$_6$(py)$_2$]$_2$(4,4′-bpy) and [Mn$_9$O$_7$(O$_2$CC$_6$H$_4$-*p*-OMe)$_{13}$(4,4′-bpy)]$_2$: new multinuclear manganese complexes..... 323<br>H.J. Eppley, N. deVries, S. Wang, S.M. Aubin, H.-L. Tsai, K. Folting, D.N. Hendrickson, G. Christou |  |
| Enhanced iron(III) chelation through ligand predisposition: syntheses, structures and stability of tris-catecholate enterobactin analogs..... 341<br>Z. Hou, T.D.P. Stack, C.J. Sunderland, K.N. Raymond |  [V(EMECAM)]$^{2-}$ An enterobactin analog whose structure is predisposed for metal binding |

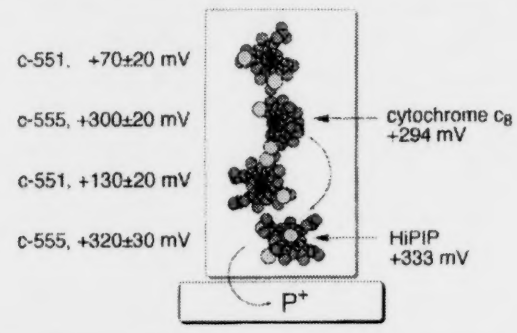
Evidence for Cu···H interactions in dinuclear Cu(I) complexes of hindered hydrotris(pyrazolyl)borate ligands..... 357
S. Kiani, J.R. Long, P. Stavropoulos



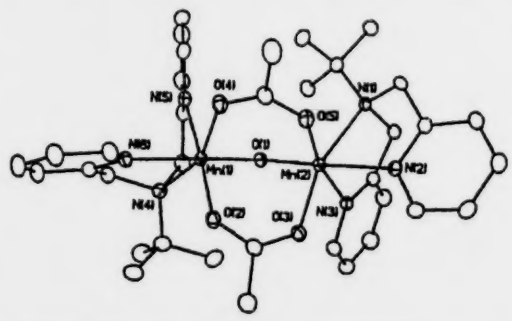

Structure and electronic properties of (*N,N'*-bis(4-methyl-6-tert-butyl-2-methyl-phenolato)-*N,N'*-bismethyl-1,2-diaminoethane)-$Fe^{III}$ (DBSQ). Spectroelectrochemical study of the red–ox properties. Relevance to intradiol catechol dioxygenases..... 367
P. Mialane, E. Anxolabéhère-Mallart, G. Blondin, A. Nivorojkine, J. Guilhem, L. Tchertanova, M. Cesario, N. Ravi, E. Bominaar, J.-J. Girerd, E. Münck



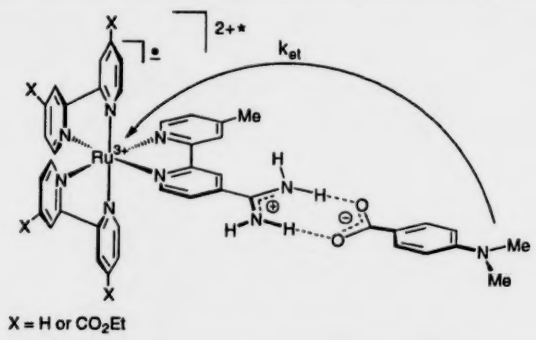
Cyclic voltammetry and spectroelectrochemistry of cytochrome $c_8$ from *Rubrivivax gelatinosus*. Implications in photosynthetic electron transfer..... 379
M. Borsari, S. Benini, D. Marchesi, S. Ciurli



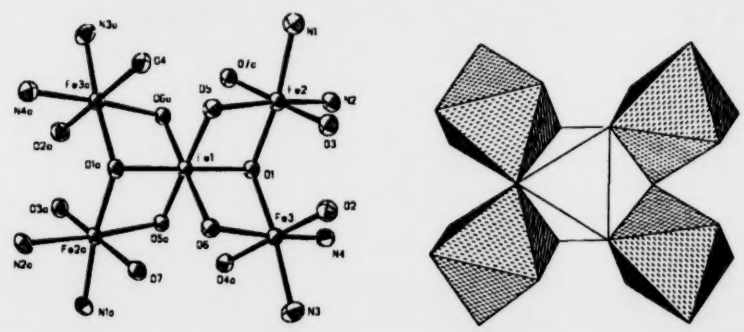

Sterically crowded manganese-oxo complexes of *N,N*-bis(2-pyridylmethyl)-tert-butylamine with bridged binuclear core types $\{Mn^{III}_2(\mu\text{-}O)(\mu\text{-}OAc)_2\}$ and $\{Mn^{IV}_2(\mu\text{-}O)_2(\mu\text{-}OAc)\}$ ..... 385
H.J. Mok, J.A. Davis, S. Pal, S.K. Mandal, W.H. Armstrong



Electron transfer within ruthenium(II) polypyridyl–(salt bridge)–dimethylaniline acceptor–donor complexes..... 395
J.A. Roberts, J.P. Kirby, S.T. Wall, D.G. Nocera

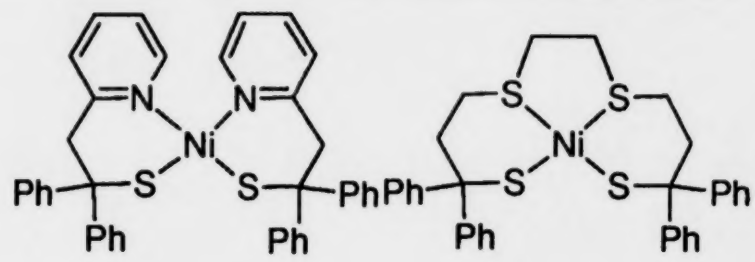



Synthesis and structures of trinuclear and μ-hydroxo pentanuclear iron(II) carboxylates as models of reduced ferritin and white rust.. 407
R.J. Lachicotte, K.S. Hagen



## Note

Square planar nickel compounds with bulky thiols ..... 415
T. Yamamura, H. Watanabe, Y. Niino, K. Fujisawa, Y. Morooka




**[Ni(dpmep)], 1** **[Ni(tpttd)], 2**

Conference Calendar ..... 421
Author Index..... 423

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